

Claims

1- An *in vitro/ex vivo* method for the cultivation of connective tissue cells or progenitor cells thereof comprising the step of contacting said cells with a matrix comprising polysulphated alginate.

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2- The method according to claim 1, wherein said matrix is suitable for the implantation into the human or animal body.

3- The method according to claim 1 or 2, wherein said matrix further comprises
10 nutrient media.

4- The method according to any one of claims 1 to 3, wherein said matrix further comprises unsulphated alginate.

15 5- The method according to any one of claims 1 to 4, wherein said polysulphated alginate and unsulphated alginate are present in a weight ratio of between 1:10 and 1:100.

6- The method according to any one of claims 1 to 5, wherein said cells are
20 connective tissue cells.

7- The method according to any one of claims 1 to 5, wherein said cells are chondrogenic.

25 8- The method according to claim 7, wherein said cells are chondrocyte precursor cells.

9- A matrix comprising polysulphated alginate and mammalian connective tissue cells or progenitor cells thereof.

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10-The matrix of claim 9, wherein said cells are osteochondral cells.

11-The matrix of claim 10, wherein said cells are chondrogenic cells.

12-The matrix of claim 9, wherein said cells are mesenchymal stem cells.

5 13-The matrix of any one of claims 9 to 12, which further comprises nutrient media.

14-The matrix of any one of claims 9 to 13, wherein said polysulphated alginate is present in a concentration between 100 ng and 500 µg/ml.

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15-The matrix of any one of claims 9 to 14, which further comprises unsulphated alginate.

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16-A pharmaceutical composition comprising the matrix of any one of claims 9 to 15.

17-Use of matrix comprising polysulphated alginate in the production of a medicament for the treatment or prevention of osteochondral defects.

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18-The use of claim 17, wherein said matrix further comprises chondrogenic cells.

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19-A method for the treatment or prevention of osteochondral defects comprising administering to the osteochondral defect a matrix comprising a polysulphated alginate.

20-The method of claim 19, wherein said matrix further comprises connective tissue cells or progenitor cells thereof.

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21-The method of claim 19, wherein said cells are osteochondral cells.

22-The method of claim 19, wherein said cells are chondrogenic cells.